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AN ECONOMIC EVALUATION OF NETWORK COST MODELS

(79 pages)

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EXH-468

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APPENDIX A

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1. The FCC's Total Element Long-Run Incremental Cost ("TELRIC") Method⁴

In its *Local Competition Order*,⁵ the FCC described its method for setting prices for the unbundled network elements incumbent local exchange carriers are required to offer to competitors. It viewed its approach as a special case of the TSLRIC concept described above, where costs are calculated for network elements, rather than retail services;⁶ hence the acronym "TELRIC."

In terms of the more general concept of incremental costs, TELRIC maintains the following specific assumptions.

First, the business decision being modeled is that of a hypothetical local exchange carrier⁷ that offers unbundled elements to retail providers (possibly itself) at undifferentiated prices. Hence the increments in question are the total volume for the elements demanded by the retail providers.

Second, the time horizon over which the ILEC offers the wholesale elements is assumed to be the longest of the long-run. Implicit in this definition are the assumptions that (1) the ILEC will effectively be a monopolist in the provision of network elements for the indefinite future and (2) competitors will need to obtain such elements to compete over this time frame.

⁴ The FCC also promulgated essentially the same cost standard for determining the forward-looking costs of basic service for universal service purposes. Dubbed "Forward-looking Economic Costs" ("FLEC") when used for universal service, the FCC's description closely aligns with its earlier discussion of TELRIC and, in fact, the FCC urged state commissions to use the same costing approach for both unbundled element pricing and in determining the cost of universal service. Federal Communications Commission, *Federal-State Joint Board on Universal Service*, Report and Order, adopted May 7, 1997 (released May 8, 1997), ¶s 250-251.

⁵ Federal Communications Commissions, Implementation of the Local Competition Provisions in the Telecommunications Act of 1996 ("Local Competition Order"), adopted August 1, 1996 (released August 7,1996).

⁶ Local Competition Order, ¶s 672 and 678.

⁷ The carrier is hypothetical in the sense that its wholesale services are considered as separate services, in contrast to services produced in combination with retail services. Therefore, by design, costs that are shared costs across retail services that use common network elements become direct costs for the elements themselves.

⁸ In presenting its definition of long-run in ¶ 677, the FCC quotes William Baumol, who gives a definition of a very long-run period.

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Third, because it focuses on undifferentiated costs and prices for network elements, the FCC's methodology calls for the assignment of certain non-volume-sensitive costs to the unit costs (prices) for the elements. For example, in ¶ 682 of the *Local Competition Order*, the FCC prescribes the assignment of shared costs (e.g., support structures such as telephone poles) to the elements that share these costs and the assignment of spare capacity to element costs, through the use of actual fill factors. Similarly, in ¶ 696, the FCC calls for the allocation of a firm's common costs to elements.

Fourth, the ILEC's costs are determined with reference to a hypothetical carrier that is able to install new network equipment in the current locations of the ILEC's central offices. ¹¹ This assumption will produce valid economic costs to the extent to which the assumed new network equipment approximates the market value of the ILEC's existing facilities. ¹² Although the FCC believes that its assumption of new forward-looking technology placed in existing wire center locations produces the best approximation of an ILEC's economic costs, it appears that its choice was a compromise between a complete "scorched earth" approach, in which the hypothetical carrier has a completely blank slate upon which to build its network ¹³ and basing costs on the ILEC's

⁹ In a later section, we will describe how the costs of providing service at demand levels less than the effective capacity of the facilities in question (spare capacity) is a fixed cost (which can be either product-specific or shared) that in general does not necessarily have to be recovered uniformly over uses of the facility.

¹⁰ The distinction between shared costs and common costs is the following. Shared costs are costs that are incurred in the production of two or more services (but not all the firm's services) and only go away if the firm ceases production of all the services in question. Common costs are costs shared among all the firm's services.

¹¹ Local Competition Order ¶ 685. How far the definition of new forward-looking network equipment extends is an area of considerable controversy. For example, entrant local exchange carriers ("CLECs") routinely argue that the rebuilt network called for by TELRIC should include brand-new ideally configured central office buildings. This literal interpretation of what a rebuilt network means appears to be inconsistent with both the objective of a cost study—to approximate the ILEC's economic costs—because real firms do not always deploy brand-new buildings to house their network facilities and what the FCC had in mind, as indicated by its subsequent discussion of pricing for central office use by CLECs, which only makes sense in the context of using existing buildings.

¹² Emmerson, op. cit., p. 188.

¹³ Local Competition Order ¶ 683.